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Elder Abuse Identification in the Prehospital Setting: An Examination of State EMS Protocols

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Abstract

Objective—Elder abuse is a common and morbid condition that often goes undetected. While emergency medical service (EMS) providers have a unique opportunity to identify elder abuse, interviews with these providers suggest that a lack of instruction specific to elder abuse limits their potential to identify the problem and take appropriate action. This study describes statewide EMS protocols relating to identification, management, and reporting of elder abuse in the prehospital setting.

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Design—Cross-sectional analysis.

Setting—Statewide EMS protocols in the United States.

Participants—Publicly available statewide EMS protocols identified from 1) published literature 2) [EMSprotocols.org](https://www.emsprotocols.org), and 3) each state's public health website.

Measurements—Protocols were reviewed to determine if (1) elder abuse was mentioned, (2) elder abuse was defined, (3) potential indicators of elder abuse were listed, (4) patient management for older adults experiencing abuse was described, and (5) instructions regarding reporting were provided. EMS protocols for child abuse were reviewed in the same manner for the purpose of comparison.

Results—Of the 35 publicly available statewide EMS protocols, only 14 (40.0%) mention elder abuse. Examining protocols that do mention elder abuse, 6/14 (42.9%) define elder abuse, 10/14 (71.43%) describe indicators of elder abuse, 8/14 (57.1%) provide instruction regarding patient management, and 12/14 (85.7%) provide instruction regarding reporting. By comparison, almost twice as many states met each of these metrics for child abuse.

Conclusion—Statewide EMS protocols for elder abuse vary in regard to identification, management, and reporting, with the majority of states having no content at all on this subject. Expansion and standardization of protocols may increase the identification of elder abuse.

Keywords

elder abuse; emergency medical services; emergency medicine; prehospital identification; prehospital protocols

INTRODUCTION

Elder abuse is defined by the Centers for Disease Control and Prevention as “an intentional act, or failure to act, by a caregiver or another person in a relationship involving an expectation of trust that causes or creates a risk of harm to an older adult.”¹ Types of elder abuse include neglect as well as physical, sexual, emotional/psychological, and financial exploitation.^{2–6} Approximately 10% of older adults in the United States (U.S.) experience elder abuse.^{5,6} Besides the obvious problems of suffering and injustice, elder abuse also frequently results in physical injury, financial loss, and increased use of health care resources.^{3,7–12} Moreover, individuals who experience elder abuse have reduced life expectancy.^{13,14}

While elder abuse has received increasing attention over the past two decades from patient advocacy groups,^{15–17} government agencies,^{18,19} and public²⁰ and private funders,²¹ challenges with recognition and meaningful interventions remain prevalent. In fact, most cases of elder abuse are not identified or reported by medical providers, county-level service agents, or others positioned to provide protection.^{3,22,23} Some cases are missed even when older adults present for medical care with physical findings suggestive of elder abuse.²⁴ Physical findings that may suggest elder abuse include dirty clothing, poor hygiene, malnutrition, bruising, burns, pressure ulcers, unexplained fractures, depression, anxiety, or impaired function.^{4,25} However, among older adults, many of these physical findings can

occur for reasons other than elder abuse, making it difficult to determine etiology based on physical exam. In part as a result of the challenges of interpreting these findings without information about the patient's living condition and availability of help at home, fewer than 5% of cases are reported to authorities.^{3,22,23} In contrast, approximately one half of child abuse cases are reported.²⁶

Emergency medical service (EMS) providers are uniquely positioned to uncover cases of elder abuse for several reasons. First, older adults experiencing abuse are twice as likely as other older adults to visit the emergency department,²⁷ and the ambulance is the mode of arrival for ~38% of all emergency department visits in this population.²⁸ (Although the exact number of unique older adults cared for by EMS providers each year in the U.S. is not known, extrapolation from state-based data suggests that more than 4 million unique individuals are cared for each year.²⁹) Second, for most responses EMS providers enter the patients' residence, giving them the opportunity to directly observe the living situations of the patient including hygiene, safety, mobility supports, access to food, quality of heating and cooling, clutter, expired medications, and other environmental hazards.³⁰ Third, EMS providers can observe caregivers' behaviors and interactions with patients. Since EMS responses are almost always unplanned, the EMS response does not give caregivers a chance to tidy up the patient and home or, if intoxicated, sober up. Fourth, EMS providers often make frequent visits to long-term care environments and may be able to identify patterns of inappropriate care.³¹ Finally, EMS providers are often the only healthcare providers to evaluate older adults that refuse transport, which is up to 10% of older adults in some populations.³² This encounter provides a unique opportunity for EMS to address social concerns, like elder abuse, that may otherwise be overlooked.³³ The role of prehospital providers in improving the health of older adults has been recognized as a clinical and research priority by the American Geriatrics Society, John A. Hartford Foundation, Society for Academic Emergency Medicine, and American College of Emergency Physicians.^{34–36}

Several studies have evaluated EMS providers' attitudes toward elder abuse and establish that, while prehospital providers believe elder abuse is a prevalent and important issue, a lack of EMS protocols and training specific to elder abuse limits their potential to identify this problem and take appropriate action.^{37–39} EMS protocols, which are established by state or regional EMS medical directors, define the operating procedures for EMS providers to follow. Although EMS providers can provide care outside of the protocols and also have the ability to contact a medical director for guidance or oversight, for the most part EMS care is constrained by protocols and the training that accompanies these protocols. Thus, EMS providers report that the lack of protocols creates a challenge for them in identifying and reporting cases of elder abuse.³⁹ Recognizing the important role of protocols in EMS care, we sought to describe current practices regarding elder abuse by reviewing publicly available statewide EMS protocols. Because there are important similarities between elder and child abuse that make their comparison compelling and relevant, protocols were also reviewed for child abuse to compare the presence and level of detail of elder abuse and child abuse protocols.

METHODS

We examined publicly available statewide EMS protocols and other accompanying documents (i.e. ‘System Protocols,’ ‘Procedures,’ and ‘Guidelines’). Additionally, the National EMS Model Guidelines and EMS protocols in permanently populated U.S. territories were searched. The search was limited to documents specifically intended for and available to EMS providers. Policy statements and advisories were not included because these documents do not directly inform EMS care. Searches and data abstraction were conducted in September and October of 2017. States were considered to have a statewide protocol if they had either a model or mandatory state EMS protocol for Basic Life Support (BLS) or Advanced Life Support (ALS) providers.⁴⁰ If the BLS and ALS protocols differed, the version which provided more information on elder abuse was used. Consistent with the methods of two prior studies evaluating EMS protocols,^{40,41} protocols for intermediate-level providers were not reviewed because few such protocols are available, and there is wide variation in scopes of practice for these providers among states.

Three different resources were used to find the online version of the most current EMS protocol for each state: Appendix A of the Kupas et al. paper that examined and published characteristics of EMS protocols,⁴⁰ [EMSprotocols.org](https://www.emsprotocols.org),⁴² and each state’s public health website. Links to each online protocol can be found in Supplementary Table S1. Protocols were reviewed independently by two authors (BN and JD) using a structured template with definitions (Supplementary Table S2). Discrepancies between reviewers were adjudicated by a third author (TPM). Data extracted from each protocol included if (1) elder abuse was mentioned, (2) elder abuse was defined, (3) potential indicators of elder abuse were listed, (4) patient management for older adults experiencing abuse was described, and (5) instructions regarding reporting were provided. To allow comparison, the same data abstraction was conducted from the same protocols for child abuse.

Mention of elder or child abuse was determined by searching for the terms “abuse,” “neglect,” and “mistreatment,” and looking for associated qualifiers such as “elder,” “senior,” or “geriatric” and “child,” respectively. State protocols that included content on adult abuse, described in protocols as “domestic violence,” “physical abuse,” or “abuse,” were not considered to have content on elder abuse because the definitions, motivations, manifestations, and reporting requirements of elder abuse are largely distinct from those of domestic violence. A protocol was considered to have defined elder abuse if it provided a statement explaining that elder abuse involves an act, or lack of action, that causes or creates a risk of harm or distress to an older adult.¹ This definition is intentionally briefer and less restrictive, hence more inclusive, than more formal definitions. Similarly, a definition of child abuse was considered present when the protocol clarified child abuse as any act of omission or commission that results in harm or potential for harm to a child.⁴³ Indicators of elder or child abuse included any mention of findings based on the physical examination of the patient, observations regarding the living environment, observations regarding acute medical problem and reason for 911 call, or social interactions and behaviors that suggest elder or child abuse. Types of indicators of elder abuse found in protocols were recorded. Patient management instructions were considered present if the protocol described how to speak to, treat, or care for patients suspected to be experiencing elder or child abuse. Finally,

instructions for reporting were considered present if the protocol provided a phone number to call, instructed EMS providers to report suspected abuse, or described mandatory reporting requirements.

RESULTS

Thirty-five states were found to have a publicly available statewide EMS protocol: 26 protocols include guidelines applicable to both BLS and ALS, 7 states have statewide protocols specific to either BLS (Connecticut, Minnesota, New York, South Dakota, and Washington) or ALS (Hawaii, New Jersey), and 2 states (Pennsylvania and West Virginia) have separate protocols publicly available for both BLS and ALS. For these two states, Pennsylvania and West Virginia, the elder abuse procedures are more robust in their BLS protocol, and therefore the state's BLS protocol was used in the data abstraction. Overall, 17 states have model protocols (i.e. the state protocol serves as an example for county-based EMS agencies) at the BLS and/or ALS level while 18 states have mandatory protocols at the BLS and/or ALS level (Table 1). No EMS protocols were found in the five permanently populated U.S. territories: American Samoa, Guam, Northern Mariana Islands, Puerto Rico, and U.S. Virgin Islands.

Of the 35 available, statewide protocols, 14 (40%) mention elder abuse (Table 1). Of the 14 protocols that mention elder abuse, 6 (43%) define it, and of the 28 protocols (80%) that mention child abuse, 9 (32%) define it. Protocols that define elder abuse often clarify that "abuse includes physical, sexual, emotional, or neglectful acts or omissions by self or others, and/or the illegal use of person or property for profit or advantage" (Connecticut, New Hampshire, and Vermont). Others provide specific definitions of abuse, neglect, and/or exploitation (New Jersey, Michigan, Vermont, and Washington). Only the New Jersey and Pennsylvania protocols provide a definition that specified the 60-year age threshold for older adults.

Ten of the fourteen (71%) protocols that mention elder abuse list indicators of elder abuse (Table 1). Indicators included in these protocols are categorized as patient physical findings, psychosocial factors, and condition of the home environment. New Jersey has the only protocol that explicitly differentiates between findings suggestive of physical abuse, sexual abuse, emotional abuse, and neglect. The other nine protocols focus mostly on findings indicative of physical elder abuse, which is much less common than other types of elder abuse, like neglect. Burns are the only indicator included in all ten protocols. Additional physical findings include descriptions of suspect injuries (i.e. head trauma, injuries in unusual locations, multiple fractures or bruises in various stages of healing). New Jersey, Pennsylvania, and Washington are the only states that describe physical findings suggestive of neglect (e.g. poor hygiene, malnourished appearance, soiled clothing, inadequate care of nails and teeth). Examples of psychosocial indicators of elder abuse found in protocols include "unsolicited history, delay in seeking care, conflicting reports of injury, and inappropriate interactions with caregivers." Conditions of the home environment that might indicate abuse are commonly described as "problematic" or "unsafe." Michigan is the only state to provide specific environmental findings, instructing EMS providers to "note signs of

inadequate housing or lack of facilities such as heat or water.” A full report of these potential indicators can be found in Supplementary Table S3.

Eight (57%) protocols that mention elder abuse also describe patient management for older adults suspected to be experiencing abuse (Table 1). These protocols mainly advise EMS providers to treat and document findings using appropriate medical treatment protocols, maintain a calm and private manner while interviewing the patients, and avoid confronting the caregiver. No protocols differentiate patient management by the different types of abuse.

Twelve (86%) of the 14 protocols that mention elder abuse provide instructions regarding reporting (Table 1). Only two of these protocols (New Jersey and Oklahoma) specify what should be reported, and only five (Minnesota, New York, Oklahoma, Pennsylvania, and Utah) instruct EMS providers to report to both the authorities and receiving facility. Additionally, although all states except New York have mandatory reporting laws for elder abuse,⁴⁴ only 10/14 (71%) indicate that reporting was mandatory in their protocol.

Of the 28 protocols (80%) that mention child abuse, 19 (68%) describe indicators of child abuse, with all states that describe indicators of elder abuse also describing indicators of child abuse (Figure 1, Supplementary Table S4). Among the ten states with protocols describing indicators of both elder abuse and child abuse, all address them in the same section, suggesting that they were written together or that one was modeled after the other. Additionally, in protocols that mentioned child abuse, 18 (64%) describe patient management, and 19 (68%) explicitly state that reporting was mandatory. The National EMS Model Guidelines mention elder and child abuse, define abuse and maltreatment, describe indicators of elder and child abuse, provide instruction regarding patient management, and advise EMS providers to be knowledgeable about mandatory reporting statutes in their state.

DISCUSSION

Statewide EMS protocols for identifying and caring for elder abuse vary in regard to identification, management, and reporting, with most protocols having no content at all on the subject. Only a small subset of the examined protocols describe indicators of elder abuse. Further, among protocols that describe indicators, the content is primarily focused on physical indicators (burns, fractures, bruises) and the timing and nature of the chief complaint (inconsistent or delayed report). While these indicators are important, they are insufficient to provide a robust approach to identify elder abuse. Physical abuse is less common than other forms of elder abuse such as neglect, and therefore, findings from the physical exam will only capture a small proportion of older adults experiencing abuse.³ Similarly, chief complaints during emergency care are rarely indicative of abuse, so focusing on them as an indicator is likely to only modestly improve the sensitivity of EMS provider evaluations to identify elder abuse. Additional indicators that EMS providers might use to identify elder abuse include characteristics of the home environment such as broken utilities, lack of heating or cooling, presence of odors, an empty refrigerator, extreme cluttering, expired medication bottles, safety hazards. Also, consideration of caregiver behavior, or the conspicuous absence of a caregiver, might provide further insights in the presence of elder abuse.

Instructions regarding reporting are also limited in statewide protocols, with only 2/35 (6%) describing details on what should be reported and 5/35 (14%) describing who should be notified. When identified, EMS providers should report elder abuse to two groups. First, if the case meets state reporting requirements (e.g., the patient has a cognitive or physical disability resulting in dependency on others), a report should be made to the appropriate county-based social service agency. Second, the EMS provider should communicate this concern and the details they observed to the receiving emergency provider. A clear understanding as to whether elder abuse is present often requires multiple observers; by notifying providers in the emergency department, EMS providers can catalyze subsequent observations that may inform consequent interventions to protect patient safety.⁴⁵

In contrast to elder abuse, child abuse is mentioned in twice as many statewide EMS protocols, suggesting a greater prioritization for the identification of child abuse than elder abuse in several states.² A disparity in the attention given to elder abuse vs. child abuse has also been observed in emergency department-based protocols.⁴⁶ Nonetheless, it is a somewhat surprising finding of this study that child abuse protocols are not universal. Additionally, a number of the child abuse protocols have very limited content regarding key issues such as indicators and reporting. Not surprisingly, many of the problems identified by EMS providers as obstacles to elder abuse identification and reporting have also been reported for child abuse.⁴⁷

Studies assessing EMS attitudes toward elder abuse found that while EMS providers express a desire to identify and report elder abuse, they often feel that they have insufficient guidance regarding how to do so.^{37,38,48} Our results are consistent with this perspective and suggests the need for (1) more substantial protocols regarding elder abuse identification and intervention, (2) clearer instructions regarding when these protocols should be implemented, (3) dissemination of these protocols throughout the country, and (4) more structured reporting guidelines and mechanisms. The National EMS Model Guidelines comprehensively address elder abuse and provide a key template that the state-level guidelines can and should follow. However, while some states use the National EMS Model Guidelines to inform their state-level protocols (indicated by similar content between the state and national guidelines), most state protocols are not consistent with the national model in regard to elder abuse.

In almost all states with state-wide protocols, non-EMS leadership can provide suggestions for protocols, which are usually updated every 5-years. However, at present, a primary limitation of knowledge translation regarding detection and management of elder abuse in the prehospital setting is a lack of primary research in this area.⁴⁹ There are no validated tools for EMS to screen for elder abuse. Further, the public health value of screening for elder abuse, although readily apparent to most experts, has not been established in any setting.⁵⁰ Consistent with this limitation, the U.S. Preventive Services Task Force concluded in their recommendation on elder abuse screening that there is insufficient evidence to assess the balance for benefits and harms.⁵¹ We conducted this study in part because, even in the absence of evidence, we think screening for elder abuse should occur in the prehospital setting. However, to move the field forward and aggressively embrace knowledge translation, a more robust knowledge base needs to be built. These efforts to establish the

value of prehospital screening for elder abuse should also examine unintended harms and costs, including the effect of EMS screening for elder abuse on delays in care, changes in the threshold for calling 911 to request help, and retaliation against victims of elder abuse who disclose information to medical providers.

Considering the unique position EMS providers have to identify geriatric issues beyond elder abuse, improvements and dissemination of EMS protocols to identify elder abuse might overlap with efforts to identify older adults in need of additional support, such as a referral to a social worker or food assistance program.^{52–54} In fact, recent efforts have expanded the roles of EMS providers and other first responders to allow for the provision of routine healthcare services, such as healthcare screening and promotion programs. Given the high prevalence and substantial morbidity of elder abuse, elder abuse screening is an important additional focus for these EMS-led community programs.

Based on previous research demonstrating that paramedics can identify older adults at risk of elder abuse, implementing screening protocols for EMS providers may effectively leverage the unique position of these providers to identify and report cases of elder abuse.^{30,33} Due to large number of older adults transported and limited time of EMS providers to conduct a screen, an optimal approach to elder abuse screening may be a multi-tier screen in which a simple, brief, but fairly sensitive initial set of observations are used to identify patients who might be at risk, and additional assessment by EMS providers or by ED nurses and physicians is made of this high risk subset of patients. Further, given the complexity of identifying elder abuse and the importance EMS provider judgement plays when determining how to treat a patient,^{55–57} a semi-structured protocol that relies on the subjective judgement of EMS providers may yield a more accurate screening tool than a highly structured approach. The addition of elder abuse screening to EMS protocols would need to be accompanied by training of EMS providers. The National Association of Emergency Medical Technicians' Geriatric Education for EMS (GEMS) course includes content on elder abuse screening and provides one such training opportunity.⁵⁸ Additional studies are needed to develop and test instruments that efficiently and accurately leverage the unique position of EMS providers to identify elder abuse in the prehospital setting. Even in the absence of these protocols, it is likely that EMS providers identify concerns for a substantial portion of older adults they evaluate. Emergency providers and admitting physicians can help their patients by being receptive to the observations of EMS providers and should attempt to obtain clinical information directly from EMS providers whenever possible.

Our search identified 35 states with publicly available statewide protocols. Through a structured survey sent to EMS directors, Kupas et. al found 38 states with statewide EMS protocols.⁴⁰ This discrepancy appears because one state (Nevada) no longer has a defined set of state protocols, and two states (Arkansas, Illinois) have no online protocol available. Another paper that used a similar method to determine EMS protocols for prehospital fluid administration found 27 states with publicly available statewide protocols. However, because ALS training is necessary to administer intravenous fluids, the authors limited their search to ALS protocols.⁴¹

This study has several limitations. Only model and mandatory statewide protocols were described. In many states, EMS protocols are developed by county and were, therefore, not included in the final data abstraction. In states with statewide protocols, local EMS agencies can augment these protocols with additional content, which may include content about elder abuse. If present, such local supplements would lead us to have underestimated the presence of elder abuse-specific instructions. Also, protocols do not determine the full scope of care provided by EMS. In states with protocols that do not mention elder abuse, EMS providers may still be identifying and reporting evidence of elder abuse of their own accord. However, given the current low rates of elder abuse identification,⁵⁹ the concerns by EMS providers about the lack of guidance regarding identification and reporting of elder abuse,^{38,39} and the importance of protocols in EMS care,³⁷ strengthening EMS protocols seems like a logical strategy for improving elder abuse identification and reporting by EMS.

In conclusion, statewide EMS protocols for elder abuse vary in regard to identification, management, and reporting, with most states having no content at all on this subject. Expansion and standardization of existing protocols and dissemination to other states may increase the identification of elder abuse in the prehospital setting. Further research is needed to define the optimal approach for prehospital elder abuse screening and, more broadly, develop and test EMS protocols that identify social and non-medical problems among older adults and link patients with needs to local social services.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Impact Statement

We certify that this work is novel. Because emergency medical service (EMS) providers has direct access to a patient's home, they have a unique opportunity to identify elder abuse. And while EMS providers are largely directed by protocols, no literature currently describes statewide EMS protocols relating to identification and reporting of elder abuse.

Figure 1. Presence of elder and child abuse indicators among publicly available, statewide EMS protocols (n=35). Alaska's protocol includes potential indicators of child abuse but not elder abuse; Hawaii's protocol does not describe potential indicators of elder or child abuse.

EMS protocol for identifying, managing, and reporting elder abuse, by state.

State	Mentioned	Defined	Reporting [*]			Patient Management	Reporting	Authority [†]
			Phys.	Psyc.	Envr.			
National EMS Guideline	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Model
Alabama	Yes	–	Yes	–	–	–	–	Mandatory
Alaska	–	–	–	–	–	–	–	Model
Arizona	–	–	–	–	–	–	–	Model
Connecticut	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Model ^a
Delaware	–	–	–	–	–	–	–	Mandatory
Georgia	–	–	–	–	–	–	–	Model
Hawaii	–	–	–	–	–	–	–	Mandatory ^b
Idaho	–	–	–	–	–	–	–	Model
Iowa	–	–	–	–	–	–	–	Mandatory
Kentucky	Yes	–	Yes	Yes	Yes	Yes	Yes	Model
Maine	–	–	–	–	–	–	–	Mandatory
Maryland	–	–	–	–	–	–	–	Mandatory
Massachusetts	–	–	–	–	–	–	–	Mandatory
Michigan	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Mandatory
Minnesota	Yes	–	–	–	–	–	Yes	Model ^a
Montana	–	–	–	–	–	–	–	Mandatory
Nebraska	–	–	–	–	–	–	–	Model
New Hampshire	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Mandatory
New Jersey	Yes	Yes	Yes	Yes	–	Yes	Yes	Mandatory ^b
New Mexico	–	–	–	–	–	–	–	Model
New York	Yes	–	–	–	–	–	Yes	Mandatory ^a
North Carolina	Yes	–	Yes	Yes	–	–	–	Model
North Dakota	–	–	–	–	–	–	–	Model
Ohio	–	–	–	–	–	–	–	Model

State	Mentioned	Defined	Reporting [*]			Patient Management	Reporting	Authority [†]
			Phys.	Psyc.	Envr.			
Oklahoma	Yes	–	–	–	–	–	Yes	Mandatory
Pennsylvania	Yes	–	Yes	Yes	Yes	Yes	Yes	Mandatory ^c
Rhode Island	–	–	–	–	–	–	–	Mandatory
South Carolina	–	–	–	–	–	–	–	Model
South Dakota	–	–	–	–	–	–	–	Model ^a
Tennessee	–	–	–	–	–	–	–	Model
Utah	Yes	–	–	–	–	Yes	Yes	Model
Vermont	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Mandatory
Washington	Yes	Yes	Yes	Yes	Yes	–	Yes	Mandatory ^a
West Virginia	–	–	–	–	–	–	–	Mandatory ^c
Wisconsin	–	–	–	–	–	–	–	Model
Total[*]	14	6	10	9	7	8	12	–

^{*} Abbreviations: physical indicators (Phys.), psychosocial indicators (Psyc.), and environmental indicators (Envr.)

[†] Simplified from the Kupas et al., Table 1, statewide BLS and ALS protocol type. Unless otherwise indicated, the protocol abstracted includes guidelines applicable to both ALS and BLS treatment protocols. Mandatory includes: mandatory without exception, mandatory with opportunity to petition for revision of state protocol, and mandatory with opportunity to petition for replacing state with local protocol. Model allows for direct implementation or local modification without petition.

^a Statewide protocol applies to BLS only

^b Statewide protocol applies to ALS only

^c BLS-specific protocol abstracted (but authority applies to both ALS and BLS)

^{*} Total does not include National Model EMS Clinical Guidelines